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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,469	02/06/2004	Masaru Fukuda	Q79675	6716

23373 7590 06/24/2005

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WASHINGTON, DC 20037

EXAMINER
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LE, THANH TAM T

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/772,469	Applicant(s) FUKUDA, MASARU	
	Examiner Thanh-Tam T. Le	Art Unit 2839	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wayt et al. (5,910,027).

Regarding claims 7, 10, 13, 15-17 and 21-22, Wayt et al., figures 1 and 8, disclose a connector arrangement comprising:

- a first connector (16) including a pair of flexible arms (48) disposed thereon; and
- a second connector (14) including a pair of arm guide members (74) disposed on an inner surface thereof, the arm guide member having an inclined push-out guide surface (78) for gradually deflecting the flexible arm as the connectors are engaged with each other, a deflection of the flexible arm generating a push-out force separating the two connectors from each other in their mutually removing directions (column 4, lines 15-21).

Wayt et al. disclose the push-out force is generated by the inclined push-out guide surface and the flexible arm except for that push-out force is greater than a contact resistance caused by a mutual connection between male and female terminals.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Wayt et al. to have that push-out force is greater than a contact resistance caused by a mutual connection between male and female terminals, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) for better engagement.

Regarding claims 8, 9, 11-12 and 19, figure 8, the flexible arm including an engaging portion/a locking projection (70) that engages the arm guide member/a securing member when the connectors are fully engaged.

Regarding claims 14 and 20, a first portion of the inclined guide surface (78) is inclined at a predetermined angle and a second portion is inclined at an angle greater than the predetermined angle.

Regarding claim 18, figure 8, the first connector including withdrawal prevention pieces (70) respectively extending inwardly from the arm members (48) and the second connector including an obstacle plate (74), the prevention pieces abutting against the obstacle plate when the first connector is attempted to be engaged with the second connector when the flexible arm is deflected.

### ***Response to Arguments***

3. Applicant's arguments filed 4/11/05 have been fully considered but they are not persuasive.

Applicant states Wayt et al., lower ramp 78 does not have an inclined length for contacting with a beam 48, therefore, Wayt et al. does not generate a push-out force.

The Examiner disagrees, since the push-out force is generated by the inclined push-out guide surface (78) and the flexible arm (48) as disclosed by Wayt et al. (column 4, lines 15-21), it is obvious to have that push-out force is greater than a contact resistance caused by a mutual connection between male and female terminals. Especially, the Examiner uses case law with optimum value for provide wayt et al. to have that push-out force is greater than a contact resistance caused by a mutual connection between male and female terminals for better engagement.

For the above reasons, it is believed that the rejections should be sustained.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

5. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

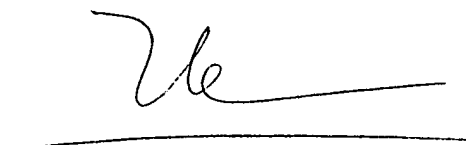
Art Unit: 2839

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Tle', is written above a horizontal line.

Thanh-Tam T. Le  
Primary Examiner  
Art Unit 2839

TL. 06/20/05.